SPECIFICATIONS FOR FIRE FIGHTING VEHICLE
(FULLY EQUIPPED)

Item	93 Date : 30 / 10/ 2011
SCOPE	To be used for fire fighting purposes
DESCRIPTION	Double cabin Fire Fighting vehicle (4X4) With seating capacity of 5+1 people

-Technical offers should explain each item required in our form below in details (comply, provided, refer to ….etc) comments are not acceptable at all.

-Technical offers will be studied according to the answers and comments, which have to be filled in our specification form below.

-Technical offer should include product catalogue.

	Required Specification	Tender's Specification			
		Detail	Brand Name	Model No.	Origin
1	**DIMENSIONSS AND WEIGHT** a. Overall length : To be mentioned				
	b. Overall width : To be mentioned				
	c. Overall height : To be mentioned				
	d. Wheel base : To be mentioned				
	e. Ground clearance : To be mentioned				
	f. Gross vehicle weight (GVW) : To be mentioned				
2	**CHASSIS** **a.** Mode of drive : 4x4				
	b. Steering : Left hand drive, power assisted				
	c. Engine 1) Type: diesel engine with turbo charger & inter cooler				
	2) Power output: a- Horse power : not less than 350 Hp at suitable RPM) b-HP / GVW : to be mentioned (higher ratios are preferable)				
	3) Stroke and no. of cylinders: 4 cycles.6 cylinders or more				
	4) Engine electronic controlling and injection mechanism to be described in details				
	5) Cooling system : water cooled				
	6) Air cleaner : oil bath or dry paper element				

	d. Transmission 1) Type : manual shift				
	2) Gearbox : not less than 8 forward and 1 reverse				
	3) P-T-O (full power) for the water pump				
	e. Cabin 1) Type : forward control with double cabin				
	2)Fabrication:all steel welded with 4 doors with windows				
	3) Tilt : power assisted tilt system				
	4) Seating capacity: 5 + 1 people.				
	5) Safety belts: for all seats				
	f. Shock absorber : telescopic, hydraulic or air - hydraulic acting type for front axle				
	g. Brake 1) Service : hydraulic, air-over-hydraulic, or full-air				
	2) Engine brake (exhaust brake)				
	3) Parking brake: pneumatic system or mechanical system with spring cylinder.				
	4) Additional brake safety systems (ABS,ASR,…,EBL) : to be mentioned				
	h. Electrical system 1-Battery and its capacity: to be mentioned. 2-Alternator (V/A), output power: to be mentioned.				
	i. Tire (on/off road) 1) Size, brand name& manufacturing date, to be mentioned.				
	2) Spare : Qty (1) , mounted, to be loaded and unloaded easily with suitable mechanism without obstructions for working on vehicle				
	j. Fuel 1) Kind : diesel				
	2) Tank capacity : To be mentioned				
	3) Jordanian diesel standards compatibility.				

	k. Gradiability: to be specified .				
	The chassis should be described in details, and an approved standard reference should be mentioned such as CE approval test or similar.				
3	**<u>SUPERSTRUCTURE</u>** **A. BODYWORK** 1) One box for rear body to allow maximum accessibility to water tank, compartments and pump site.				
	2) The body frame should be fabricated from either aluminum or specially treated steel to resist corrosion (grade and thickness to be specified).				
	3) Foldable steps around the vehicle to ease access to the compartments and equipment with a load capacity not less than 200 Kg.				
	4) The top of the superstructure should be decked with heavy-duty grip, and plated tread suitably strengthened and designed against distortion or damage from any unforeseen impacts.				
	5) The upper deck should be equipped with a handrail, made of light material for safe operation.				
	6) Suitable access (s) to the roof by means of ladder(s). (non-slip square steps) and made of light material, located at the rear of the vehicle .				
	7) Separate Compartments (five compartments) for each type of equipment with suitable fixing facilities with sliding drawers (if needed) to safely and easily retain objects.				
	8) Weather and dust-proof aluminum roller shutters should be provided with rugged type handle.				
	9) The compartments must be supplied with Illumination for night work, operated automatically when the shutter is opened.				
	10) All compartments and shelving should be provided with sufficient drain holes to prevent accumulation of water.				

	11)All tools on the top of the vehicle must be fixed with a suitable fixing mechanism.				
	B. WATER TANK 1) Tank capacity: not less than 5000 lit.				
	2) The tank should be made of high quality steel , speacialy treated and protected against corrosion. (design and material specification , thickness, to be described in details)				
	3) internally installed baffle plates, suitably protected against corrosion and deterioration, And should ensure easy access for maintenance purposes inside the tank				
	4) Manhole with a closing cap on the top of the tank, to ease access for inspection and routine maintenance.				
	5) Overflow pipe acts as a (pressure/vacuum) vent as well.				
	6) fitted with a graduated content level indicator.				
	7) Two hydrant-filling ports, one on each side (LH and RH side) with (2.5") male coupling and female blank cap, equipped with a valve.				
	8) Drain valve at suitable position at the bottom of the tank, with a piping to facilitate complete removal of accumulated sediment.				
	C. FOAM TANK 1) Tank capacity: not less than 500 lit.				
	2) The tank should be made of high quality steel , speacialy treated and protected against corrosion. (design and material specification , thickness, to be described in details)				
	3) Manhole with closing cap on top of the tank to ease access for inspection and routine maintenance.				
	4) Overflow pipe acts as a (pressure/vacuum) vent as well.				
	5) The tank should be equipped with level indicator.				
	6) Foam filling mechanism : foam pump with all facilities to be described in details				
	7) Drain valve at suitable position at the bottom of the tank, with a piping to facilitate complete removal of accumulated sediment.				

	D. WATER PUMP **1)**WATER PUMP SPECIFICATION a. High and low pressure: Should be multi- stage centrifugal pump b. coupled to the vehicle's engine via full power PTO c. low pressure output : Not less than 2800 lit. /min. at 10 bar. d. high pressure output : Not less than 250 lit. /min. at 40 bar. (pump performance chart to be provided) e. Suction lift: to be specified (preferable to be as high as possible) f. Pump shaft should be made of stainless steel. g. Pump casing and impellers made of aluminum or bronze h. Priming system: Auto priming system.				
	2)-The pump should be fitted with the following connections : a. 4" suction complete with BS coupling and blank cap b. 2.5″ BS female instantaneous coupling as an outlet complete with valves and blind cap. Q'ty (4) c. tank filling\suction d. Drain valve at suitable location e. Waterway for the dual-purpose monitor on the roof deck. f. Qty(1) first-attack high pressure hose reel, not less than 50m length, 25mm diameter. At the rear of the vehicle, 1- electric and manual rewinding mechanism 2 -the hose should be equipped with multipurpose nozzle (jet and fog). 3-Throwing range : not less than 25 meter for straight stream				

	E. Foam mixing system 1-type : around pump , proportional type 2-foam classes : suitable for any type of Foam. 3-mixing ratio : 1,2,3,4,5 and 6% 4-All foam and solution lines should be Constructed to prevent corrosion. 5 - Having the ability to suck foam from external Container (source) with all suction facilities.				
	F. Foam and water monitor:- 1-Manually controlled, dual-purpose foam/water (monitor installed on the top deck of the vehicle). 2- horizontal range: (0-360)degrees 3 - vertical range : (-15 up to 75) degrees 4- Deflector allowing straight and flat stream patterns. 5- Water /Foam mixture : not less than 2000 lit./min. 6 - Throwing distance: a - Water : not less than 50m b - Foam : not less than 25 m				

	G. CONTROLS: - control panel should be located at the rear of the vehicle , and should include the following indicators and controllers : 1) Water pump compound pressure gauge. 2) Water pump discharge pressure gauges. 3) Foam tank contents level indicator. 4) Water tank contents level indicator. 5) (water tank filling\suction) control valve 6) Hose reel control valve 7) control valve for roof monitor 8) Water pump revolution gauge and controller. 9) working hours counter. 10) Foam mixing controller 11) Illumination for night operation. 12)any other necessary controllers and indicators for optimum operation to be mentioned				
4	**ATTACHMENT**				
	a. font hydraulic winch: 1. driven via PTO 2. minimum pulling capacity of (6) tons 3. 50 m wire rope with hook 4. having a facility to operate manually {all the winch components and accessories designed according same working load (i.e. 6 ton) } **b.snow blade:** 1- to be fitted on the front bumper of the vehicle 2- Hydraulically operated. 3- Fixing, removing, and controlling of the snow blade must be mentioned in details. The details also must show the capability of vehicle to handle such blade. 4- Snow blade manufacturing must be from well-known company.				

	5- to specify the mechanism of fitting snow blade with the front winch together on the front bumber (if its possible)taking into consideration that there is no obstruction in operation,if there is no possibility specify in details mounting & dismounting for both (snow blade & front winch).				
	c. lifting bag set with all necessary accessories Pneumatically operated via compressed air cylinders. consists of the following 1. Lifting bags with different sizes. 2. Inflation hoses. 3. Air cylinders. 4. Pressure reducer 5. Dual controller. 6. Shut off hose with safety valve. With the following specification :				
	A- Lifting Bags				
	1 - capacities: (10, 20, 30) tons. Qty : One of each				
	2 - Nominal content (air and water content) for all sizes to be mentioned.				
	3 - Dimension (LXWXH) for all sizes to be mentioned.				
	4 - Weight for all sizes to be mentioned.				
	5 - Max. inflation height for inflatable part of the bag to be mentioned. (it is preferable to be the same height at edges and center of the bag)				
	6 - Inflation time: to be specified (as short as possible)				
	7 - Material: a. Multi layer reinforced construction b.Flame resistant c. Oil resistant d. Wear and chemical resistant e. Anti-slippery surface.				

	f. working temperature range (to be specified) g. storage temperature range (to be specified)				
	B - Air Cylinder				
	1. Working pressure (200 - 300 bar)				
	2. Nominal content (water content) min 10 liter.				
	3. Test pressure to be specified.				
	4. Suitable base at the bottom of cylinder to facilitate working while the cylinder in standing position.				
	C - Inflation Hoses.				
	1. Hose length: min .10 m QTY(3)				
	2. Working pressure of 8 bar minimum.				
	3. Hose diameter to be specified				
	4. Quick connect quick release couplings with lock.				
	D - Pressure Reducer.				
	1. Suitable for 200 bar or 300 bar air pressure supply.				
	2. Supplied with two gauges				
	3. Adjustable				
	E - Dual Controller.				
	1. Dead man handle				
	2. Operating two bags simultaneously.				
	3. Provided with two safety valves.				
	4. Provided with two pressure gauges.				
	F - Shut-off hose with safety valve for each supplied bag				
	1. Allows pressure to be reserved in disconnected air bag.				
	G - General.				
	1. All the above mentioned components should be stored in a suitable storage box.				
	2. Catalogs for use, maintenance and spare parts for each component should be provided.				
	d. Red multi-flash beacon light (cone type) Q'ty (2)				
	e. Electric siren with public address system (different tunes)Q'ty (1) set				

	f. Search light : (not less than 100 w each) , one located on the cab, the other one located at the rear , working via vehicle electricity complete with all necessary cables and fittings				
	g. Fog Light in the front (yellow) Q'ty (2)				

5	**EQUIPMENT** a. Suction hose with BS coupling (4″ X2.5m) mounted on the roof Q'ty (4)				
	b. Suction strainer with basket Q'ty (1)				
	c. Rope for suction hose handling (10mm X 10m) Q'ty (1)				
	d. Nozzle 1) Variable water nozzle with 2,5″ BS coupling Q'ty (2) 2) Foam nozzle : - Q'ty (1) for the hose reel - Q'ty (2) medium expansion - Q'ty (1) low expansion				
	e. Pick-up type tube foam mixing device Q'ty (1)				
	f. Divider& Collector: - 2.5″ Divider with BS coupling Q'ty (1) -2.5″ Collector with 2.5″ BS coupling Q'ty (1)				
	g.Rescue rope 50 m long with minimum diameter of 12 mm Q'ty (2)				
	h. search light and electrical system • Electric generator (220V, 380V), driven via gasoline engine. (4 stroke engine , electric and manual starting) Minimum of 5KVA. 1. Qty (1) 3-phase socket 2. Qty (2) sockets for 220V output 3. electric adapters for equipment optimum operation				

	i. Light mast : 1. Minimum 7m height from the ground 2. Adjustable search light, Min of (1000) watt each. Q'ty (2) 3. 360° rotation manually. 4. Lifting and lowering speed to be mentioned 5. Pneumatically operated 6. weather proof				
	j. Portable search light set : 1. Search light (Min of 500 watt each) Q'ty (4) 2. Cord reel, not less than 50 m long. Qty (2) 3. Tripod Q'ty (2)				
	k . hand spot light, minimum of (2) working hours, rechargeable from external source. Q'ty (4)				
	l. 220V inlet socket from commercial source for vehicle battery charging				

6	**TOOLS :** **a**) Light-alloy extension ladder (3 sections, total length approx. 9m) mounted on the top of the vehicle with suitable brackets. Q'ty (1)				
	b) Rod cutter with cutting capacity of 12 mm diameter Q'ty (1)				
	c) Fire axe and Multipurpose axe Q'ty (1) each				
	d) Hammer (5kg) Q'ty (1)				
	e) Shovel (sharp type) Q'ty (3)				
	f) Fire pike and Fire bar Q'ty (2) each				
	h) Dry chemical powder extinguisher (6kg) Q'ty (2)				
	i) CO2 extinguisher (6kg) Q'ty (2)				
	j) Hydraulic rescue tools :- Multi purpose hydraulic rescue tool set (heavy duty) includes :				

	1. Power unit (working pressure not less than 600 bar). 2. Combi tool (cutter and spreader) (working pressure 600 bar minimum) 3. Ram set. 4. Steering cutter. 5. Manual pump 6. Chains and all accessories 7. Hydraulic hoses with reel (not less than 25mlong)				
7	**Options at an extra price** **{the supplier should insure providing a suitable compartments with all needed accessories to fix and store these options (either the options are provided or not)}**				
	1) a complete set of breathing apparatus Qty (4) with suitable fixing mechanism on the back of the front seats to ease operating (fixing mechanism to be described in details) -with (4) spare cylinders. -breathing apparatus set to be with the following specifications :				
	1-A 200 –300 bar cylinder and valve assembly :- a- light weight, made of high quality material. b- Water capacity of 6 liters c- Free gas capacity (to be mentioned). d- Weight (to be mentioned) e- Plug-in manifold for regulator and flexible hose for content gauge and warning whistle. f -Cylinder valve fitted with a safety-locking device.				
	2- Full face piece assembly : A mask and balanced demand valve of positive pressure type, inserted valve of plug-in type.				

	3-Pressure reducing regulator of two stage type.				
	4-Harness and back frame assembly for supporting the equipment on the body of wearer consist of : a- Easily adjustable wide padded shoulder straps; and waist belt. b-Individually pivoting shoulder and waist strap give maximum ease of movement distribution. c-Ergonomically shaped “open type” carrying frame for comfort and to increase ventilation.				
	5-Plug-in manifold regulator and flexible hose for content gauge and warning whistle (any other safety devices should be mentioned)				
	6-Should be approved by the international standards (NFPA, EN), with approval certificate				
	7-All design features of SCBA assemblies should be specified in details.				
	8-With all catalogs and user manual both printed and on a (CD) or video tape				
	9-Catalogs for use, maintenance and spare parts for each component should be provided.				
	2) Fire suit set Q’ty (5**)** specification as following :				
	1 - Jacket and Trousers as the following				
	a-Available in different sizes: to be specified				
	b-Color : black or dark blue				
	c-With high intensity reflective twin straps on front and back				
	d-Made of NOMEX III or PBI Gold				
	e-Multi layers configuration				
	f-Good thermal insulation				
	g-Rips, wear, punchers, abrasion and mildew resistance				

	h-Water proof				
	i-Breathable moisture barrier				
	j-Easy to wear				
	k-Knees and pants cuffs				
	l-For the jacket : 1)Comfortable over lapping collar 2)With a zipper and a Velcro closure over it for the jacket 3) 5 Pockets (one for radio ,two on the chest and two on the west) 4)Shoulders and elbows reinforced with extra layer of outer shell				
	m-For the Trouser : - provided with removable x-shap suspender pads				
	n-Should comply with (EN 469 or NFPA 1971) and a certificate of approval to be submitted with the technical offer				
	2 - Fire fighting boots , as following				
	a-Waterproof leather, breathable				
	b-Size : different sizes, available sizes to be specified				
	c-With textile lining				
	d-Leg length: (25 – 30) cm				
	e-Color : black with high intensity reflective strap				
	f-Steel toe cap and reinforced sole				
	g-Boot straps on both sides , Without zip				
	h-Sole : 1-rubber shell 2- Oil and fuel resistant 3-Anti skid tread				

	4-Shock absorbing				
	i-Foot bed: 1. Anatomically formed 2. Exchangeable 3. Washable 4. Good moisture absorption 5. Short drying time				
	3 - Safety belt :				
	a-Width not less than 3 inches				
	b-Provided with hook and 1 m rope attached to the belt				
	4 - Helmet :				
	a-Suspension: Center of Gravity adjustment system				
	b-Face shield with thumb wheel adjustments.				
	c-Easy-to-adjust, quick-release chin strap with postman's slide.				
	d-NOMEX III covers for neck / ear protection.				
	e-Color: yellow				
	5 - hood				
	a-To be used to protect the ear and the neck area from heat				
	b-To be suitable with the supplied helmet				
	c-Made from NOMEX III or equivalent				
	d-Single layer				
	e-Seals tight around face and SCBA masks				
	f-Elastic enclosure allows easier donning				
	g-Seamless chin area				
	h-Should be approved by any international standard with certificate of approval				
	i-Size: different sizes, available sizes to be mentioned				
	6 - Fire man Gloves				
	a-Five finger type				
	b-Fire retardant and good thermal insulation				

	c-Easily grasped fine objects, and provide secure grip during operation				
	d-Breathable with inner lining				
	e-Size: different sizes, available sizes to be mentioned				
	7 – General for fire fighting suits.				
	a-Instruction sheet(catalog if available)about cleaning and storage for each item should be provided				
	b-All above mentioned items should comply with up- to-date standard (NFPA 1971 or equivalent EN standard) with certificate of approval for each item				
	3) Delivery hoses : - 2.5″X25m delivery hose with 2.5″BS coupling Q'ty (6) - 1.5″ X25m delivery hose with 2.5″ BS coupling Q'ty(6)				
8	**ACCESSORIES** a) Standard chassis tool set to be specified in details Q'ty (1) set				
	b)Standard body tool set to be specified in details Q'ty (1) set				
	c) Wheel stopper Q'ty (2)				
	d) Tire chain Q'ty (1)set				
	e) Vehicle color: red with yellow high intensity reflective strip around the vehicle.				
	f) Hose bridges Q'ty (2)				
	f) Spare parts, use and, maintenance catalogs (Qty 3 sets of each + CD for spare parts				
	h) protection guards for head light, beacon, stop light and the illumination in the compartments.				
	i) Hydraulic Jack with its all-necessary tools.				

9	**GENERAL**				
	a-Approved standard reference should be submitted like CE , or similar				
	b-Mobile radio installation requirements : 1. suitable location on console 2. dimensions (H* W* D) : (60 * 185 * 75) dash and desk models (radio + control head) 3. electrical source 12V-DC/ 15 A. Antenna Tetra Combined and GPS GMAE4248 A model (380- 430 MHz), fixed over the cabin with GPS, RF cables as a connection from the antenna to the mobile radio.				
	c-The company should hold High quality technical training course on maintenance and fire fighting operations				
	d-All sketches and drawings with all details as center of mass, all dimensions and locations of all equipment, components and any other necessary details must be submitted.				
	e-Providing a list of recommended spare parts for the chassis and superstructure.				
	f-Supplier should guarantee supplying of spare parts (Min. of 10 years from time of delivery).				

10	CAR GPS (NAVIGATION) with the following aspects :

1	Display size : 5"				
2	Display type : WQVGA color TFTwith backlight				
3	Battery: rechargeable lithium-ion Battery(life:upto 4 hrs)				
4	Battery charging system as follow: a- 240 ac/dc charger. b- charging through vehicle electricity				
5	High-sensitivity receiver				
6	Base map : cover all Jordan				
7	Ability to add maps				
8	Compatible with NAVTEQ maps				
9	Internal memory				
10	Recording feature (to be described in details)				
11	Accepts data cards : SDTM card Data card to be supplied (minimum of 2 GB)				
12	Waypoints / favorites / location :1000 or more				
13	Voice prompts, (e.g. "turn right in 500 m.") (internal and external speakers)				
14	2D , 3D , and picture in picture navigation views				
15	Auto re-route (fast off –route and detour recalculation)				
16	Choice of route setup (faster time ,shorter distance ,off road)				
17	Route avoidance (avoid highways, tolls etc.)				
18	Speed limit indicator (displays speed limit for most major roads)				
19	Where Am I? (find closest hospitals , police & gas stations, nearest address and intersections)				
20	Qwerty or ABC keyboard (layout)				
21	Arabic language				
22	Custom POIs (ability to additional points of interest)				
23	Photo navigation (navigation to geotagged photos)				
24	World travel clock , currency and unit converter , calculator				

25	Picture viewer				
26	Lock function (anti- theft feature)				
27	Touch screen				
28	USB port				
29	The system must be installed in a suitable location in the console.				
30	All Necessary accessories for optimum installation and operation should be supplied				
31	Update the maps and software yearly , for minimum of five years				
32	Full catalogues				
33	The supplier should hold an operation and technical training course				
34	Minimum of three years warranty				